

Assignment I

It is a good idea to do these problems in teams. Discussing the issues amongst yourself will help you better understand what's happening.

1)

. The Production Possibilities Boundary (PPB)

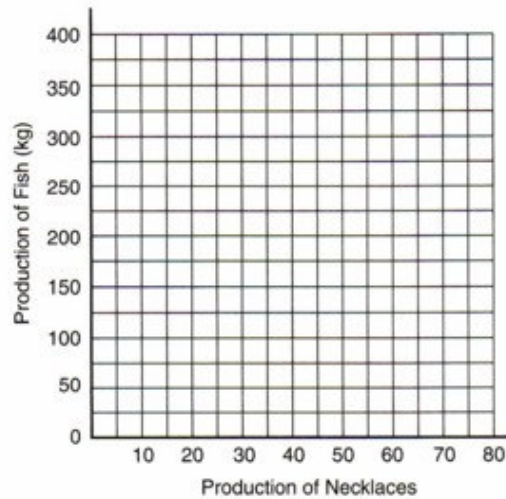
This exercise gives you practice in constructing and interpreting a production possibilities boundary (PPB).

The economy of Islandia produces only two consumer goods, *necklaces* and *fish*. Only labour is required to produce both goods, and the economy's labour force is fixed at 100 workers. The Table below indicates the daily outputs of necklaces and fish that can be produced with various quantities of labour.

Number of Workers	Daily Necklace Production	Number of Workers	Daily Fish Production (kilograms)
0	0	0	0
20	10.0	20	150
40	20.0	40	250
60	25.0	60	325
80	27.5	80	375
100	30.0	100	400

- (a) Draw the PPB for this economy, using the grid in Figure 1-1. (*Hint:* The labour force is always fully employed along the PPB.)

Figure 1-1



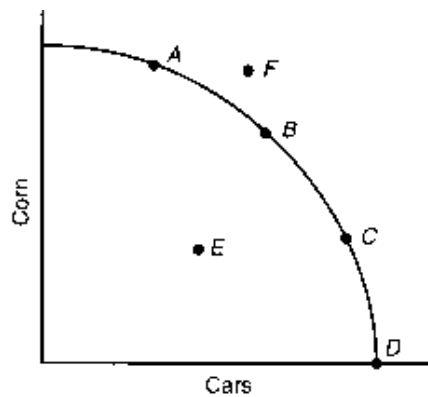
- (b) What is the opportunity cost of producing the first 10 necklaces? What is the opportunity cost of producing the next 10 necklaces (i.e., from 10 to 20)? What happens to the opportunity cost of necklaces as their production is continuously increased?

- (c) Suppose that actual production levels for a given period were 20 necklaces and 250 kilograms of fish. What can you infer from this information?

- (d) Suppose a central planner in this economy were to call for an output combination of 35 necklaces and 150 kilograms of fish. Is this plan attainable? Explain.

- (e) New technology is developed in necklace production, so that each worker can now produce double the daily amount indicated in the schedule. What happens to the PPB? Draw the new boundary on the grid. Can the planner's output combination in (d) now be met?

2)



. If the market economy moves from Point A to Point C

- (a) there is unemployment in the corn industry.
- (b) the opportunity cost of the marginal car increases.
- (c) technological change has made the production of cars more efficient.
- (d) the central planner values cars more than corn.
- (e) All of the above are true.

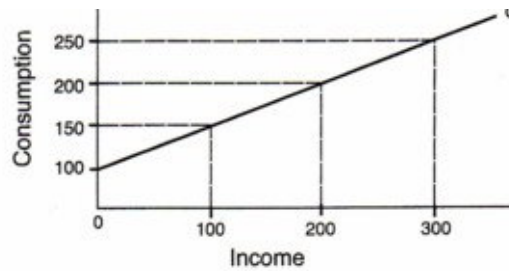
. Point E represents a situation that

- (a) is currently unattainable and can be expected to remain so.
- (b) will be attainable only if there is economic growth.
- (c) results from inefficient use of resources or failure to use all available resources.
- (d) has a higher opportunity cost than points on the boundary itself.
- (e) can never occur in a market economy.

. With currently available resources, point F represents a situation that

- (a) results if resources are not fully employed.
- (b) can be achieved if consumers demand fewer cars than at point C.
- (c) is currently attainable.
- (d) can be achieved if all resources were allocated to the production of cars.
- (e) None of the above.

3)



. In the graph above, the slope of the line showing the relationship between consumption and income is

- (a) -2.
- (b) 0.5.
- (c) 2.
- (d) 2.5.
- (e) 150.

. According to the graph above, when an individual has no income, consumption is

- (a) -200.
- (b) -100.
- (c) 0.
- (d) 100.
- (e) None of the above.

. The line showing the relationship between consumption (C) and income (Y) can be represented mathematically as:

- (a) $C = 0.5Y$.
- (b) $C = 2Y$.
- (c) $C = 100 + 0.5Y$.
- (d) $C = 100 + 2Y$.
- (e) $C = -100 + Y$.

4)

- . An increase in quantity demanded refers to**
- (a) rightward shifts in the demand curve only.
 - (b) a movement up along a demand curve.
 - (c) a greater willingness to purchase at each price.
 - (d) an increase in actual purchases.
 - (e) a movement down along a demand curve.

5)

An increase in demand means that

- (a) consumers actually buy more of the good.
- (b) at each price, consumers desire a greater quantity.
- (c) consumers' tastes have necessarily changed.
- (d) price has decreased.
- (e) All of the above are correct.

6)

A shift in the supply curve may be caused by any of the following except

- (a) an improvement in technology.
- (b) an increase in the wage paid to labour.
- (c) an increase in average consumer income.
- (d) an increase in the number of firms in the industry.
- (e) Both (b) and (c) are correct.

7)

An increase in the price of an input will

- (a) decrease quantity supplied.
- (b) decrease quantity supplied at each price.
- (c) decrease supply.
- (d) cause the supply curve to shift to the left.
- (e) Answers (b), (c) and (d) are all correct.

8)

When price exceeds its equilibrium value, the quantity actually bought and sold

- (a) is the quantity demanded.
- (b) is the quantity supplied.
- (c) is unknown because the market is not in equilibrium.
- (d) is different for consumers than for producers.
- (e) is the quantity at equilibrium.

9)

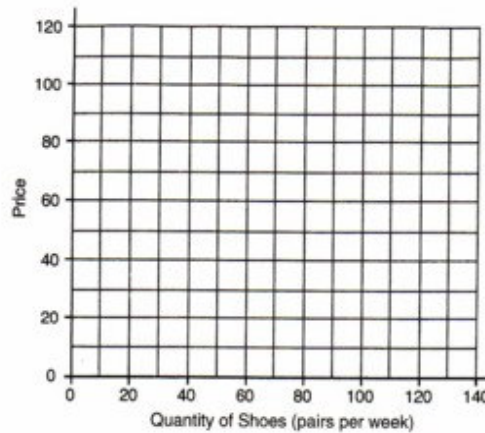
Market Equilibrium Using Demand and Supply Schedules

The demand and supply schedules for athletic shoes sold at Trendy Shoes Inc. at the local mall are hypothesized to be as follows (in pairs of shoes per week):

(1) Price	(2) Quantity Demanded <i>D</i>	(3) Quantity Supplied <i>D'</i>	(4) Excess Demand (+) Excess Supply (-)
\$120	40	_____	_____
110	50	_____	_____
100	60	_____	_____
90	70	_____	_____
80	80	_____	_____
70	90	_____	_____
60	100	_____	_____

- (a) Using the grid provided in Figure 3-1, plot the demand and supply curves. Indicate the equilibrium levels of price and quantity.

Figure 3-1



- (b) Fill in column 4 for values of excess demand and excess supply. What is the value of excess demand (supply) at equilibrium? _____



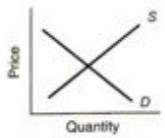

- (c) Suppose there is a change in teenage fashion such that a substitute shoe, Block Mardens, becomes trendy. As a result, the quantity demanded of athletic shoes at Trendy Shoes Inc. decreases by 30 units per week at each and every price. Put the new quantities demanded in column (2) above, and draw the new demand curve D' on the grid.
- (d) At the initial equilibrium price you reported in answer (b), what market pressure on price is created by this change in tastes? How does price respond to this pressure? How do quantities demanded and supplied react?
- (e) After price has adjusted to the new equilibrium, what is the equilibrium price and the equilibrium quantity?

10)

The Laws of Demand and Supply

Read the description of events (2nd column) in each market (1st column). Predict the impact on each market of these events by drawing the appropriate shifts of curves in the accompanying diagram. Use + and - to indicate whether there will be an increase or decrease in demand (*D*), supply (*S*), equilibrium price (*P*), and equilibrium quantity (*Q*). If there is no change, use 0. If the change can't be predicted, use *U* for uncertain. [Note: See "Hints and Tips" for finding the answer when two events occur simultaneously.]

Figure 3-2

Market	Event		<i>D</i>	<i>S</i>	<i>P</i>	<i>Q</i>
(a) Canadian wine	Early frost destroys a large percentage of the grape crop in British Columbia		_____	_____	_____	_____
(b) Wood-burning stoves	The price of heating oil and natural gas triples		_____	_____	_____	_____
(c) Cellular phones	Technological advances reduce the costs of producing cellular phones		_____	_____	_____	_____
(d) Gold	Large gold deposits are discovered in northern Ontario		_____	_____	_____	_____